

IN THE CLAIMS:

1. (Currently Amended) A method for determining a plurality of filter coefficients for a digital filter, ~~more particularly for the~~ Universal Mobile Telecommunication System (UMTS) (Universal Mobile Telecommunication System), in which the filter coefficients are predetermined and modified in a filter design program, ~~characterized in that~~ comprising the steps of:

dividing the predetermined filter coefficients (b_v) ~~are divided by~~ a same scaling factor (s), ~~in that the~~ to result in a plurality of scaled filter coefficients (β_v);

quantizing the scaled filter coefficients (β_v) ~~are quantized by this, in~~ so that only a certain maximum number (n) of "1" bits are used ~~counted from the~~ most significant bit onwards and in that ~~the~~ respective quantization error of the each quantized scaled filter coefficient is determined relative to the predetermined filter coefficient; and by

~~repeatedly~~ repeatedly modifying for a predetermined number of times ~~modification of the scaling factor (s) of the~~ respective scaling factor (s_0) ~~being~~ set in which the quantization error ~~is becomes~~ a predetermined minimal error value, and in that the filter coefficients (β_v) having the minimal error are implemented in the filter.

2. (Currently Amended) A method as claimed in claim 1, characterized in that the number (n) ~~is comprises one of four, or three, or two.~~

3. (Original) A method as claimed in claim 1, characterized in that if again a "1" bit follows the last "1" bit, a rounding is effected from the last bit onwards.

4. (Currently Amended) A digital filter, more particularly for a Universal Mobile Telecommunication System (UMTS), in which the digital filter coefficients are processed with the signal, ~~characterized in that~~ comprising

means for dividing the plurality of binary filter coefficients (b_i) ~~are~~ scaled by a scaling factor (s_0) to result in a plurality of scaled filter coefficients (β_i);

means for quantizing and in that the filter coefficients (β_i) ~~are~~ quantized so that they do not exceed a ~~certain predetermined~~ number (n) of "1" bits from ~~the~~ most significant bit onwards, in that adder stages ADD(3) ~~are provided which process for processing~~ the scaled and quantized filter coefficients (β_i) with the signal.

5. (Currently Amended) ~~A~~ The digital filter as claimed in claim 4, ~~characterized in that the~~ comprising a final stage (4) ~~is provided which processes for processing~~ the output signal by a factor (s_0) reciprocal to the scaling factor.

6. (Currently Amended) A digital filter as claimed in claim 4, characterized in that each adder stage (3) comprises $n-1$ adders (9, 10, 11) and a means for n-squaring multipliers multiplying an input by 2^i by shifting the input by i (5, 6, 7, 8).

7. (Currently Amended) A digital filter as claimed in claim 4, characterized in that in the adder stages (3) and the number n of the squaring multipliers a means for multiplying an input by 2^i by shifting the input by i (5, 6, 7, 8) is different and the number of adders (9, 10, 11) is accordingly different.

8. (Currently Amended) A digital filter as claimed in claim 7, characterized in that individual adder stages (3) have only a ~~single squaring multiplier~~ single multiplying means (5).

9. (Currently Amended) A digital filter as claimed in claim 14, characterized in that the squaring multiplier- means for multiplying (5, 6, 7, 8) an input by 2^i by shifting the input by i is formed by connections of its inputs and outputs.

10. (Currently Amended) A digital filter as claimed in claim 14, characterized in that the adder stage (3) comprises a programmable selector (12) which in accordance with its programming connects the ~~squaring multiplier~~ means for multiplying an input by 2^i by shifting the input by i (5, 6, 7, 8) with the adders (9, 11).

11. (New) The method according to claim 1, further comprising multiplying (5, 6, 7, 8) an input by 2^i by shifting the input by i with a plurality of adders (9, 11).

12. (New) The method according to claim 1, further comprising:
multiplying an input by 2^i by shifting the input by i (5, 6, 7, 8), which is formed by connections of its inputs and outputs.

13. (New) The method according to claim 11, wherein an adders stage (3) comprises a programmable selector (12) which in accordance with its programming connects the shifted input with the adders (9, 11).